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### **ABSTRACT**

The role of institutional research in policy analysis. regarding the operation of a computer model for delivery of financial aid to disadvantaged students is considered. A student financial aid model at Arizona State University is designed to develop a profile of late appliers for aid funds and also those who file inaccurate or incomplete applications. The unmet financial need of these students is then projected for the various campus-based aid programs, allowing the aid officer to inventory and stockpile such funds to later serve these students with special needs (usually disadvantaged students). However, although disadvantaged students may have difficulty in completing accurate, timely aid applications, most institutions have a first-come, first-served policy for obtaining financial aid. Setting aside funds for late appliers involves many pragmatic, legal, and public relations matters. The involvement of an institutional research unit of any college using the model is likely to be central, and exemplifies the type of policy analysis implications inherent in any research activity that affects social policy. To respond effectively to the dilemmas identified, institutional researchers need to understand the decision-making framework and values of decision makers at the college. (SW)

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# POLICY ANALYSIS IMPLICATIONS OF A MODEL TO IMPROVE THE DELIVERY OF FINANCIAL AID TO DISADVANTAGED STUDENTS

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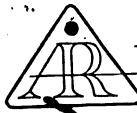
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### THE ASSOCIATION FOR INSTITUTIONAL RESEARCH

This paper was presented at the Twenty-Third Annual Forum of the Association for Institutional Research held at the Sheraton Centre in Toronto, Ontario, May 23-26, 1983. This paper was reviewed by the AIR Forum Publications Committee and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC Collection of Forum papers.

D. R. Coleman, Chairman Forum Publication Advisory Committee Contributed Paper, Association for Institutional Research Forum Toronto, May, 1983

POLICY ANALYSIS IMPLICATIONS OF A MODEL TO, IMPROVE THE DELIVERY OF FINANCIAL AID TO DISADVANTAGED STUDENTS

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This paper discusses the potential role of institutional research in analysis of the policy implications of operating a computer model designed to improve the delivery of financial aid to disadvantaged students. The discussion is presented in three sections. The first describes the development of a temputer model to improve the delivery of financial aid to disadvantaged students. The second explores the significant institutional policy implications of operating the model. The final section outlines the potential role of institutional research in analysis of the policy implications.

### Development of the Student Financial Aid Model

The Ford Foundation (1981) recently reported:

Billions of federal, state and institutional funds have been spent during the past decade to remove financial barriers facing individuals seeking a college education. Yet young people from low-income families are still less'than half as likely to enroll in college as their counterparts from high-income families....One factor that may impede educational access and opportunity for urban low-income and minority students is the complexity of the financial aid system itself....Many students and parents face multiple applications, complex terminology, and different schedules and procedures in different programs (p. 8).

The report stated that a disproportionately high number of low-income and minority students fail to cope successfully with application complexity and deadlines, and concluded that: "Delays or late filing can effectively preclude a student from receiving aid (especially scholarships and grants) since many

states and institutions cannot assist all eligible students, and stop making awards when funds run out (p. 15)."

As if in anticipation of the findings and recommendations of the College Board and the Ford Foundation as cited above, John D. Parker, then Director of Institutional Studies and Planning at. Arizona State University, proposed a project to the Fund for the Improvement of Postsecondary Education (FIPSE) that would attempt to alleviate the problem in large public urban universities. The proposal was accepted and funds granted for a three-year project (#116CH2O3O3) which began September 1, 1980.

Essentially, the thrust of the main project is aimed at enabling large universities to develop a profile of late appliers for aid funds and also those who file inaccurate, incomplete, or erroneous applications. The unmet financial need of these students is then projected for the various campus-based aid programs, allowing the aid officer to inventory and stockpile such funds to later serve these students with special needs (usually disadvantaged students).

The setting for development of the model is Arizona State University, an urban campus of over 38,000 which is experiencing a moderate rate of growth. In addition, the proportion of students from an ethnic/minority group and/or an economically disadvantaged group is increasing. Currently, students who are among the first to apply for financial assistance have the best chance to receive an award, but disadvantaged students often apply late or submit incomplete or incorrect application forms.

The model as developed in the proposal considers the situation described above as a classic inventory problem. In this case, the inventory is available student financial aid funds, and the problem is to maintain the inventory at a sufficient balance to provide aid to those who need it most and to utilize all funds by the end of the funding cycle so that subsequent allocations will not

be reduced because of nonexpenditure. The research design incorporated a three-year base of historical data on applicants for student financial aid at Arizona State University. Information was included describing the date on which the application was initiated, whether or not the application was returned because of incomplete or inaccurate information, and whether or not the applicant received funds. Also included was information on the socioeconomic and demographic background of the student. This information indicates that a disporportionately high number of those who did not receive funds failed to receive aid because of late, incomplete, and/inaccurate applications. These students were also from families in the lowest socio-economic levels, and often from ethnic/racial minority groups.

A composite profile of these student and the amount of their unmet needs was projected into the application cycle that occurred during the second year of the grant. During this test year of the model, an apriori system was developed that simulates withholding certain amounts of funds to meet the needs of disadvantaged students who apply late.

Before considering the impact of late applications on the awarding of student financial aid, it is important to understand the types of aid that can be packaged to meet student need. Nationwide, two distinct patterns of assistance constitute the financial aid system. The first component of the system, which generates the majority of student aid funds, is provided and controlled by sources outside of the institution. The date by which applications must be filed and the size of the award is under the sole discretion of the extra-institutional source of each aid in this category, that is, these programs operate independently of institutions. Examples of extra-institutional aid includes the Pell Grant program (formerly termed the Basic Educational Opportunity Grant program), an entitlement program under the



sponsorship of the federal government, and the Guaranteed Student Loan (GSL) program, in which commercial lenders provide repayable loans to students. These two large federal programs (the Pell and GSL) together provide the majority of student financial aid funds from all sources.

The second component of the financial aid system is under direct control of inetitutions. Financial aid in this component include athletic scholarships, academic scholarships, and the federally-funded campus-based aid programs. Eligibility for the campus-based aid programs is based solely on financial need, however, this factor may be only one of several criteria for academic or athletic scholarships. Because of the need-based eligibility criterion and the discretion that institutional financial aid personnel exercise in distributing the three campus-based aid programs, they are logical starting points from which to begin an investigation into the equitable distribution of aid for late applicants.

Students initially denied aid because of late applications may ultimately receive financial aid. The assistance they receive may be extra-institutional aid and/or campus-based aid. Financial aid offices are obligated to process applications for Pell Grants and GSL program at any time during the academic year. Moreover, unobligated balances may occur in many of the campus-based programs and, when this becomes apparent to financial aid personnel, students who were formerly denied can be assisted.

The purpose of the model is to provide an accurate, timely and orderly process by which to inventory the available funds through the annual funding cycle and to match these with the balance of unmet need that occurs during the year, whether or not such unmet need results from late, inaccurate and incomplete applications.

During the third and final year of the project, the model was tested and incorporated into the large student financial aid system being developed by the computer systems office of the university. The model articulates with the packaging routine of the overall financial aid system and, by the end of the project in September, 1983, will become an integral part of the university's operation.

The FIPSE project also has a continuing emphasis on dissemination of the model and its potential benefits to other institutions. During the course of the project, the needs of disadvantaged students in small colleges with limited computer capacity also became apparent. An opportunity arose to develop software usable on the typical minicomputer increasingly being purchased by small colleges, both two-year community colleges and private liberal arts colleges. During March and April of the final grant year, the resulting program operable on several popular types of minicomputers was validated and written as a training module specifically for small-college student financial aid officers with minimal computer background. Essentially, this development of software parallels the thrust of the main project aimed at large universities.

## <u>Institutional Research and the Policy Implications of the Model</u>

In rectifying a specific problem, the solution (as is so often the case with programs in the social policy area) may create a new and unintended set of administrative problems for the institution which may equal or even exceed the seriousness of the original problem.

The involvement of an institutional research unit of any college or university using the model described above is likely to be quite central, and exemplifies the type of policy analysis implications inherent in any research activity which affects social policy. Involvement is likely because very few



student financial aid offices have the research capability necessary to develop the model--although once developed and tested, the model can be incorporated into the need analysis-packaging-disbursement routines of the financial aid computer programs. . As indicated in the previous section, the model requires that a statistical profile be developed of applicants who file late, or with incomplete, inaccurate or otherwise\_"unproccessable" forms. In most colleges and universities the institutional research unit is (or at least should be) the natural source of assistance for the student aid office. In developing and testing a model, the institutional research unit can become involved (and perhaps unwillingly identified) with some sticky policy dilemmas. appropriate term here is dilemma, rather than problem, because while problems are capable of solution, dilemmas have only choices between more or less Consider some of the policy, alternatives in this painful alternatives. seemingly innocuous quest to redress some inequities inherent in the typical institutional student aid process.

This model illustrates the interaction between contract research of the type often sought by institutions and the policy implications of the results of such research for the institution. Contract research is usually quite focused, since it is typically funded by a single agency or foundation with a limited agenda for use of its resources. In this case, FIPSE has a very broad agenda, but the proposals which come to it are for discrete projects, typically carried out within a single institution. The project described in the preceding section was developed to deal with a specific problem in a single institution, with the expectation that a successful project could be generalized to other institutions. In this case, the "fallout" of policy implications for the institution is interesting, indeed.



Because the federal campus-based programs typically fall short of meeting the total unmet need of students applying for assistance, improving the delivery to any specific group tends to decrease the availability of funds for all other groups. The stated target groups of the campus-based programs are disadvantaged youth. Yet, under the first-come, first-served policy in operation at most institutions, and approved by the U.S. Department of Education, these types of students are poorly served because disproportionately large numbers of them apply late, or with inaccurate or incomplete forms that cannot be processed during the normal cycle. Often such applicants have problems with complicated forms, have little family support in applying for such funds, and in general become discouraged by the process, especially when they learn when many others of their group were not awarded funds because of these problems. Legal and public relations problems may arise when it becomes known that the proposed model withholds funds for those who apply late in the cycle.

One advantage of the first-come, first-served system is that it can to some extent avoid political and legal problems by placing the burden for successful application equally on all students. The issue of potential inequity arises when it can be shown that the normal application process lessens the probability of award to disadvantaged students. The inequity becomes ironic, and also a potential volatile political problem, when one considers that disadvantaged students were the original implicit target group of the student aid programs when they were created.

But by redressing the apparent inequity, another may be created when it can be shown that setting aside funds for late appliers can potentially deprive some students who apply within stated deadlines. This can occur whenever calculated financial, need of the total applicant pool exceeds the funds available in any given funding cycle of the campus-based programs.

We can consider the implications of the dilemma at two levels. The first level is more pragmatic and relates to legal and public relations matters.

First, it is essential that the institution's student financial aid program remain in legal compliance with all of the federal and other regulations governing awarding, disbursement and control of funds. In the case of the proposed model, the institution will remain in compliance if the target group (disadvantaged students who are denied funds under normal operation of the institution's student aid process) is identified as a special class of qualified recipients on an apriori basis. Then, specially earmarked funds can be used to serve those groups. However, the regulations have nothing to say about how the institution handles the practical internal problems of this strategy. Legal compliance is determined on a case-by-case basis by federal bureaucrats. The regulations applying to Title IV student aid funds are internally inconsistent, and subject to constant change caused by new legislation, administrative and personnel changes, varying and often conflicting interpretations by different levels of the bureaucracy, and continuing legal and technical challenges by institutions and public and private agencies. Bureaucracies typically are able to define noncompliance easier than defining a course of action as being in compliance, since the latter implies a certain freedom of action that may well lead to problems further down the road.

Once legal compliance (or at least the absence of noncompliance) is determined, the first logistical problem to be encountered is the matter of how visible and open the model's process should be to concerned constituencies. The experienced administrator and researcher will opt for candor and honesty,

if only for professional and moral integrity reasons. If these reasons are not persuasive, the experienced administrator also knows that someone is likely to figure out that if funding is not increased, but late appliers are awarded funds that had been denied them under the former procedures, then that money must come from the funds previously distributed exclusively to those who applied on time. The public relations problem calls for some delicacy. Should an appeal be made to the sense of altruism on the part of the regular appliers? Should an appeal be made to their sense of noblesse oblige?

Then, the problem arises of actual logistics--how is the stockpiling of funds to be done? Assume that 15% of the campus-based program funds must be stockpiled for the target group; should all of the normal recipients be asssessed 15% of the award indicated by the standard assessment of their financial need? A new inequity might be created. Fifteen percent of a \$300 Special Educational Opportunity Grant might .represent the marginal difference between dropping out or staying in school for a recipient who is at the limit of his financial resources, but 15% of a \$3,000 loan is less likely to be that critical margin. Therefore, should a sliding scale be used, perhaps like a progressive tax? Or should certain applicants from the normal group be singled out for total denial in order to reach the 15% needed. If so, on what basis? Perhaps a more palatable solution than either of these would be to use the model to estimate the amount needed for stockpiling, and allocate that amount before the awarding process begins to those who apply on time. But, ipso facto, there will be a shortfall of 15% before the normal deadline occurs, thus penalizing those, who applied before the deadline, but not quite early enough. The immediate reactions of the applicants thus denied is predictable, as is the stampede the following year among the knowledgeable repeater applicants.

Perhaps all three of these strategies are simply unpalatable, and are seen as creating more of a problem than the original inequity. In other words, the decision might be to climb back on the first horn of the dilemma and beg off with the standard excuses and buck-passing: "It's not our fault we have to impose these deadlines; why doesn't the federal government fund these programs on an entitlement basis like the Pell Grants? Sure, helping the minority/disadvantaged student was clearly the implicit goal of these programs originally, and are a disproportionate number of those closed out by the complexity and deadlines of the system, but it's not our fault the ' lowest-income students have the most difficulty coping. We didn't create the complicated forms and tight schedules; we are just the mechanics who operate the system." And so forth. But will these "explanations" mollify the increasingly militant and sophisticated leaders of the groups who seek to represent the students disenfranchised under the first-come, first-served system?

Consider another, more intriguing level of policy analysis potentially generated by the proposed model. If the institutional research used in developing a model can identify a target group of especially needy minority/disadvantaged students, then it can just as well identify other groups. Why not groups of students that, while not particularly fulfilling to a sense of altruism, may be much more beneficial in an instrumental way to the institution's goals? For a somewhat contrived but not implausible example, say a huge new incentive "fund for excellence" is to be awarded by a major foundation to colleges that enroll a certain quota of Hispanic-surnamed students who score in the top 10% of college aptitude tests. Why not lavish discretionary (institutional/private and campus-based program) aid funds on such students to entice them on campus? Depriving a few other perhaps more

needy students in the process would be unfortunate, but the short-term gain for the institution if the foundation funds are won by this strategy would be well worth it (although the students thus deprived of aid may not appreciate the magnificence of their sacrifice).

Or how about strategies that enhance the long-term benefits to the institution? Why not have the institutional research unit develop a profile of potential "good alumni"? Some simple descriptive and correlational techniques could identify those who (1) persist and succeed to graduation with a minimal use of institutional resources'like remedial programs and discretionary aid, and (2) become alumni who are well enough satisfied with the institution to donate funds and recruit new students. Discretionary student aid dollars diverted away from "problem" students and targeted to entice potential benefactors will, over the long run, pay the institution, not cost The practical benefits of such a strategy may outweigh the moral problems as tar as the institution is concerned, but what about the donors of the discretionary aid funds, both public and private, who had such simple goals in mind as helping financially needy students to attend college? Role of Institutional Research in Analyzing Policy Implications

The policy implications of the unforeseen potential "side-effects" of the project described in the preceding sections raise interesting questions concerning the role of the institutional researcher in resolving these issues. Also, the skills and implications of becoming involved in resolution of the issues brings a new dimension to institutional research.

This paper extends the theme suggested in two earlier papers presented at . the 1981 and 1982 AIR Forums. The first of these, by Fenske and Parker (entitled "A Model for Institutional Policy Analysis: The Case of Student

Financial Aid) suggested that "The acceptance of a policy analysis for the profession of institutional research would have several implications:

(1) reduction in the volume of descriptive work, e.g., questionnaires, routine information requests: (2) increased effort in the development of new data sources and new analytic capabilities; (3) the use of a problem criterion for the acceptance of a work request, e.g., is there a decision to be made, who is the decision-maker; (4) the use of a problem focus and problem orientation in conceptualizing and designing work activity, e.g., does the decision-maker have a clear understanding of the problem, what are the objectives, what are the alternatives; and (5) access to decision-makers and to data sources must

The second paper by Parker and Fenske (entitled "Policy Analysis: The New Reality for Institutional Research) suggested that "for the 1980's the most viable and dynamic role for institutional research will be in providing institutional leaders with policy-relevant knowledge in order that they may become more effective participants in the policy process."

The illustrative example in the present paper, combined with the points raised in the preceding two papers, suggests that institutional research, where it occurs as a vital function (as distinct from routine or mechanical activity) will invariably be involved in policy analysis. However, to serve the institution effectively in this role, the institutional researcher needs new and different skills.

First, the institutional researcher needs to recognize the policy implications of projects in which he/she becomes involved. It is best if recognition occurs in the beginning stages of the project, and strategies developed to deal with the consequences. In some cases, the problem may be

be assured."

resolved through an entirely different approach than originally suggested by the user.

To bring such skills to any problem, today's institutional researcher needs a much broader background than offered by traditional institutional research activities. Without this background, some issues may go completely undetected until the consequences become apparent.

This may indicate that while technical skills, such as quantitative research tools and data processing expertise may be important in success in entry-level institutional research positions, success at higher positions will go to those whose experience encompasses many operational areas in the institution. As always, information is power, and those who can analyze or recognize policy implications best are those whose knowledge of the concerns and problems of the institution is the broadest.

Second, to respond effectively to the dilemmas identified, the institutional researcher needs an understanding of the decision-making framework within the institution, the values of the decision-makers, and the political power bases that impact the viability of possible alternatives coming out of the policy analysis. In this role the institutional researcher deals with users who may not agree with his/her analysis of the policy implications and, therefore, must walk a "tight rope" to develop alternatives that minimize conflict, while accomplishing the project in the most beneficial manner to the institution. In this role, naivete of analysis may doom the project and certainly the effectiveness of the institutional researcher.

It is apparent that the role just described is a role not all in the profession will wish to fili; certainly not all institutional researchers are prepared for this role. However, it is the contention of this paper and the



two preceding papers (referred to above), that policy analysis is becoming an unavoidable part of the functions of the institutional researcher. Even if there is an attempt to avoid this role, the inexperienced will quickly learn that the complexity of today's higher education institutions will result in similar dilemmas arising regardless. Those who can deal with these issues will earn the respect of those administrators responsible for policy making in the institution. He/she will become an active member of a policy council and management team.

